

set forth in paragraph 6 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Each of Applicants' independent claims, e.g. claims 1, 7, 13 and 15, recite that a kinoform is superimposed on an aspheric surface. In claim 1, one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface. In claim 7, one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface. In claim 13, a first aspherical surface is superimposed with a kinoform. Claim 15 recites that at least the first lens has a kinoform superimposed on an aspheric surface on one of a first surface or a second surface.

The reliance in the Official Action on the disclosure in *Chipper* for anticipating Applicants' independent claims is improper. Nowhere in the disclosure in *Chipper* is each and every element of Applicants' independent claims disclosed.

For example, the Official Action refers to several locations in *Chipper* as disclosing a kinoform superimposed on an aspheric surface. In column 6, lines 52-55, it is disclosed that objective lenses 32, zoom lenses 34 and 36 and collecting lenses 38 and 40 may include aspheric surfaces. In column 7 lines 60-63, *Chipper* discloses that diffractive lenses 42 and 44 have a diffractive surface which may be a kinoform. Thus, the two noted recitations in *Chipper et al.* do not place a kinoform superimposed on an aspheric surface but expressly place these features on separate and distinct lenses, as denoted by the use of different reference numerals. In column 9, lines 40-47 *Chipper* does disclose that the diffractive surface of diffractive lenses can be formed on a second side of the objective lens. However, this disclosure merely places the kinoform of the diffractive surface on a second

side of a lens, e.g. objective lens 32, and does not superimpose the kinoform on the aspheric surface. Indeed, *Chipper* discloses placing the kinoform on the second side, e.g., the side opposite the aspheric surface.

In the Examiner's response to Applicants' earlier arguments, the Examiner asserts that *Chipper* teaches the diffractive surface can be formed on the side of a lens element and thus necessarily the kinoform which is simply the diffractive surface (or groove form) is superimposed or applied to the aspheric surface. This is inaccurate. *Chipper* explicitly discloses the aspheric surface on a first side and a kinoform on a second side of a lens. Further, the Examiner has made no showing that the disclosure in *Chipper* necessarily results in the asserted lens construction.

Thus, the disclosure in *Chipper et al.* does not disclose each and every element of Applicants' independent claims. Since *Chipper* has failed to disclose each and every element as claimed, the anticipatory rejection is improper.

Further, the Examiner has appeared to tacitly recognize that the anticipatory rejection is improper in the response to arguments. The Examiner has stated on page 5 of the Official Action that "it is well known to include aspheric surfaces on any lens surface for optical performance gains." Thus, the Examiner is relying upon an unsubstantiated assertion of what is alleged to be known in the art as a basis of an anticipatory rejection. For at least this further reason, the rejection of claims 1, 3-7, 13-15 and 17 under 35 U.S.C. §102(b) as being anticipated by *Chipper* is improper.

Moreover, Applicants' independent claims are allowable over *Chipper* when considered either individually or in the manner as modified by the Examiner. The

Examiner has provided no motivation within the teachings of the art to superimpose a kinoform on an aspheric surface. Indeed, the disclosure in *Chipper* expressly teaches away from such a combination by noting that the kinoform is on a second side of the lens with an aspheric surface. One of ordinary skill in the art considering the disclosure in *Chipper* would not have been motivated to superimpose a kinoform on an aspheric surface and each of Applicants' independent claims distinguish over the disclosure in *Chipper*.

Further, Applicants respectfully traverse the Examiner's assertion that it would have been obvious to combine the aspheric and kinoform surfaces onto a single side of a lens. An aspheric and a kinoform on separate sides of a lens or on separate lens elements in a manner as disclosed by *Chipper* allows independent control and variation of the optical features. One of skill in the art would not have been motivated to place an aspheric and a kinoform on the same side of a lens element because it would have been thought to inhibit independent fabrication and control. However, Applicants have discovered among other things that superimposing a kinoform on an aspheric surface affords several advantages. Placing these optical features on one surface can provide lower manufacturing costs. For example, the number of process steps and the number of molds and/or machines required to make the particular optical elements can be reduced. In addition, combining the aspheric and kinoform on the same surface can provide a more accurate alignment of these optical features. For example, when placed on separate sides of a lens or on separate lens elements, the kinoform and the aspheric must be aligned for proper operation. However, Applicants have discovered among other things that when the kinoform is superimposed on

the aspheric, the alignment is built into one superimposed surface thus providing a more accurate alignment.

In summary, the disclosure in *Chipper* fails to anticipate Applicants' independent claims. Moreover, the disclosure in *Chipper* when considered either individually or in the manner as proposed in the Official Action, fails to suggest or provide any motivation for supplying a kinoform superimposed on an aspheric surface. Accordingly, Applicants independent claims distinguish over the references of record and are allowable.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 5, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chipper* in view of U.S. Patent No. 4,154,503 to Lettington et al. (hereafter "*Lettington et al.*") on the grounds set forth in paragraph 6 of the Official Action. This rejection is respectfully traversed.

Lettington et al. is relied upon in the Official Action for teaching that a moldable IR transmissive material is an arsenic selenide glass. However, neither *Chipper* nor *Lettington et al.*, considered alone or in combination, teach, suggest or provide motivation for a kinoform superimposed on an aspheric surface of an infrared lens, or an infrared imaging optical arrangement with a first lens having a kinoform superimposed on an aspheric surface. Thus, the combination of *Chipper* and *Lettington et al.*, as relied upon by the Examiner, would not have resulted in Applicants' presently claimed invention. Accordingly, withdrawal of the rejection of claims 5, 18 and 19 is respectfully requested.

CONCLUSION

A Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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